

accidental, but as a well-characterized, tolerably frequent disease *sui generis*, the chief symptoms of which differ on the one hand from ordinary psoriasis, and, on the other, from all other forms of arthropathy. The eruption never occurs in small, round foci, but always in extensive plaques which are localized by preference in the axillæ, the cleft between the nates, and on the posterior surface of the scrotum, and are extraordinarily refractory to treatment. The arthropathy appears without any previous infectious disease; several joints are simultaneously affected; the course is rapid, and the final result is marked deformity. Cardiac sequelæ do not occur. Many cases resemble that form of gonorrhœal rheumatism which is localized upon the fingers. Investigation with the Roentgen rays has shown that the terminal phalanges of the fingers are completely absorbed, while the other phalanges are markedly rarefied. Osteophytes also occur, which may lead to ankylosis or luxation of the joints. The etiology of the disease is completely unknown. Neither local nor general treatment produces any effect.

OPHTHALMOLOGY.

UNDER THE CHARGE OF

EDWARD JACKSON, A.M., M.D.,
OF DENVER, COLORADO,

AND

T. B. SCHNEIDEMAN, A.M., M.D.,

PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC.

Empyema of the Frontal Sinus; Orbital Complications Treated by Superheated Steam.—DENNIS (*Archives of Ophthalmology*, July, 1904) reports a case treated by the method advocated by Dr. Golovine, of Moscow (*Archives of Ophthalmology*, vol. xxvii.). The patient, a man, aged fifty-one years, had severe cellulitis of the right orbit, the eyelid was closed, and the ball pushed forward, downward, and inward; fluctuation above. A free opening was made in the upper outer one-third of the orbit, resulting in a free discharge of thick, offensive pus. A small roughened area of bone was found, also an opening leading into an unusually large frontal sinus. Fluids passed into this opening and discharged slowly into the nostril, but the sinus could not be thoroughly emptied in this way. The opening into the sinus was kept open and the thick mucoid discharge washed out. By the removal of numerous polypi and the tip of a thickened middle turbinate an effort was made to establish a permanent opening into the nostril. After thorough irrigation three times daily for six weeks there was no diminution in the thick mucopurulent discharge. An opening was then made under ether into the frontal sinus, which was found to be 32 mm. in its transverse diameter. The mucous membrane was curetted as thoroughly as possible, and a drainage-tube was passed from the sinus into the nose. The opening into the orbit was allowed to close, and irrigation

was kept up through the external opening with free drainage into the nose. After three months of this treatment the discharge stopped. Four months later the patient returned with profuse mucopurulent discharge into the nostril. Irrigation through the nostril had no effect in lessening the discharge.

Obliteration of the sinus was then determined upon, and, as chiselling the anterior portion of the sinus would leave a large scar, the method of Golovine was chosen. Under anæsthesia a new opening was made through the old scar, and superheated steam was allowed to flow into the sinus. Three applications were made, the total time being one minute. The sinus was lightly packed with iodoform gauze. There was no reaction following the operation. The packing was removed daily and the cavity irrigated with 50 per cent. peroxide of hydrogen.

The patient was under observation for five and one-half years after the operation. There was no return of the trouble, no exophthalmus, and but little disfigurement, the scar having the appearance of a small bullet wound.

The writer advocates the use of this method in selected cases as being easy, safe, thorough, and, with proper precautions, leaving a minimum amount of disfigurement. It is not applicable to cases of necrosis or where the disease has extended to the brain. It may be used with advantage combined with radical operation.

Observations on the Prognostic and Diagnostic Value of Retinitis in Diabetes.—NETTLESHIP (*Royal London Ophthalmological Hospital Reports*, June, 1904) believes that the presence of retinal changes in a person with diabetes does not point to the probability of early death with the same frequency as does the retinitis of chronic Bright's disease. In support of this view he gives the result of observations made upon 48 patients who had diabetic retinitis or retinal hemorrhage. The age of the patients ranged from forty-one to seventy-nine years; 38 of the 48 are known to have died; 9 died within twelve months of the discovery of the retinitis, and 11 others during the second year—i. e., 19 died within two years of the retinitis being discovered. The remaining 18 died at periods varying between two and eight years, and to this number must be added 10 others who were living at dates varying from two to ten years from the retinitis. Thus 60 per cent. lived more than two years after the eye disease was found, and only about 20 per cent. died within one year. This is widely different from the history of ordinary renal retinitis (excluding pregnancy cases), in which among the author's own cases less than one-third lived two years after the retinitis, and nearly two-thirds succumbed within twelve months. The prognosis for life is, therefore, much better in the renal cases of all ages (excluding those caused by pregnancy).

In many of the diabetic cases the retinal degeneration (exudation and hemorrhage) increases either steadily or by repeated relapses, even when the general condition of the patient has improved. As regards improvement of vision, therefore, the prognosis in diabetic retinitis should be very guarded.

Since many of the subjects of diabetes also pass more or less albumin a doubt has been expressed as to whether the retinitis was not caused by coincident renal disease. Nettleship states that there appears to be

no ground for doubting that one-half to three quarters of the subjects of glycosuria in whom retinal complications occur die directly from their diabetes and not from any accompanying renal disease, and the presumption in these is that the ocular mischief is caused by the principal malady.

There is also direct evidence that diabetes alone can cause retinitis in cases where the urine is from beginning to end free from albumin.

Primary Chancre of the Conjunctiva and Interstitial Keratitis.—

COLLINS (*Royal London Ophth. Hospital Rep.*, June, 1904) reports a case of primary chancre of the left lower lid. Eight months after the appearance of the sore the left eye became the seat of interstitial keratitis. The writer refers to five other previously reported cases. In all these cases the keratitis was confined to the eye on which the primary lesion was situated. The association of these two rare affections in this group of cases would seem to imply more than a chance coincidence. It would suggest that the proximity of the primary lesion in syphilis to the eye predisposes it to become subsequently the seat of an interstitial keratitis. The fact that in each case the keratitis occurred in the eye on the side on which the chancre was situated and on that side only is further in keeping with this suggestion.

The writer also reports another case which is worthy of record, but which differs from the others in that the primary lesion was on the lip instead of the lid.

In these cases of interstitial keratitis coming on in acquired syphilis it is interesting to note the remarkable variation in the time which elapsed between the occurrence of the primary lesion and the onset of the ocular trouble. The shortest interval was five months, the longest ten years.

Amblyopia from Disease of the Optic Nerve (Retrolbulbar Neuritis). Its Treatment by Hypodermic Injections of Strychnine.—ROOSA (*Post-Graduate*, July, 1904) advocates the use of hypodermic injections of strychnine in increasing doses in the treatment of toxic amblyopias. He believes that the best results are achieved when the injections are made in the temporal region, although he was often obliged to make the injections in the arm, and in some cases no injections were used, but the strychnine was given internally. If this treatment is undertaken while the lesion is a retrolbulbar neuritis, before atrophy has occurred, a cure is to be expected. Atrophy from syphilitic infection is incurable and is of spinal or cerebral origin, and not the result of a retrolbulbar neuritis. The writer has found the treatment by strychnine effectual in purely neuritic cases only. When the disease is of spinal or cerebral origin strychnine offers no hope.

Foreign Bodies in the Eye and their Removal with the Electromagnet.—MARPLE (*Medical Record*, June 25, 1904) records several cases, types of the various forms of injuries due to foreign bodies in the eye. He states, in conclusion, that an eye in which a piece of iron or steel is buried invariably deteriorates, and ultimately becomes blind if the foreign body is not removed, unless it becomes completely encapsulated. If the foreign body is in the anterior segment of the eye the Haab magnet is almost universally used, at least to get the particle into the anterior chamber.

The injury in the great majority of cases when it is in the anterior segment of the eye is not attended with a prolapse of the iris, and the occurrence of this complication makes it probable that the foreign body has not penetrated the globe. This symptom is not a reliable one in case the foreign body has made a large or irregular wound in the eye.

If the foreign body has penetrated into the vitreous or posterior part of the globe, localization either with the sideroscope or x-ray had better precede any attempt to extract it, especially if the lens is still transparent. After the particle has been localized it can be removed by way of the anterior chamber with the Haab magnet, or by opening directly into the sclera near where the particle has been located.

If the symptom of pain cannot be elicited with the Haab magnet this is to be interpreted as evidence that there is no foreign body in the eye; that it is enveloped, in recent cases, in a fibropurulent exudation, or a blood clot, or (in less recent cases) that it is firmly encapsulated; that it has passed entirely through the globe, and is lodged partly or wholly in the orbital tissues (double perforation).

HYGIENE AND PUBLIC HEALTH.

UNDER THE CHARGE OF

CHARLES HARRINGTON, M.D.,

ASSISTANT PROFESSOR OF HYGIENE, HARVARD MEDICAL SCHOOL.

The Chemical Constitution of Bacterial Cells and the Mode of Formation of Antitoxins.—The chemical constitution of bacterial cells and the mode of formation of antitoxins in the body are subjects which to-day are commanding an enormous amount of scientific investigation. No contribution to the solution of the question of chemical composition has appeared which is more worthy of note than that of Professor V. C. VAUGHAN (*Journal of the American Medical Association*, September 3, 1904, p. 643). Various of his students have shown the presence of carbohydrates, nuclein bodies, proteids, and poisons in the cell substance of a number of species of bacteria, and lately he and Wheeler have succeeded in splitting off, by means of sodium alcoholate, highly poisonous groups from the cell substance of the colon, typhoid and anthrax bacilli, and with these groups they have produced neutralizing antibodies. Investigation of the colon toxin leads Vaughan to the conclusion that it is composed of a haptophore and a toxophore group, and he suspects that the toxin group is a neurin, the reasons being both chemical and physiological. The part of the colon cell substance which is soluble in water is non-poisonous, but it yields a hæmolyisin and a group that splits up the hæmoglobin into hæmatin and a globulin. The split-off toxin, thrown into the peritoneal cavity of a guinea-pig, causes death, with no evidence of irritation of the peritoneum, within very few minutes; but when the sterile germ substance is introduced, the result is a hemorrhagic peritonitis, ending in death in from ten to twenty-four